

8-21-12

GCF - Greatest Common Factor

- The largest # that can go into 2 or more #s
** 1st check if the smallest # can go into the other #(s). If so, that's your GCF.

Ex: 4 and 12
GCF is 4

2 Ways to Find GCF:

① List the factors of each # & compare
Ex: 12, 16, 56

12: 1, 2, 3, ④, 6, 12

16: 1, 2, ④, 8, 16

56: 1, 2, ④, 7, 8, 14, 28, 56

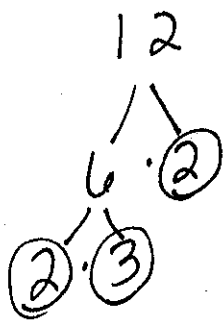
GCF is 4

② Use Prime Factorization

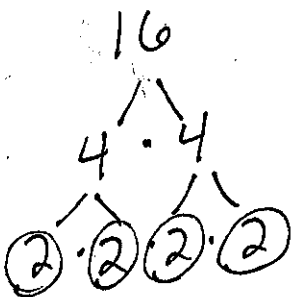
Steps:

- ① Find the prime factors of each #
- ② Write their common prime factors
- ③ Multiply them

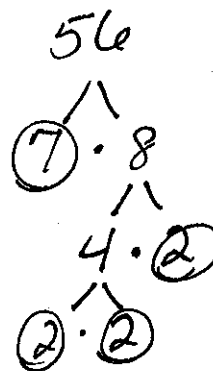
Ex:



$$\boxed{2 \cdot 2 \cdot 3}$$



$$\boxed{2 \cdot 2 \cdot 2 \cdot 2}$$

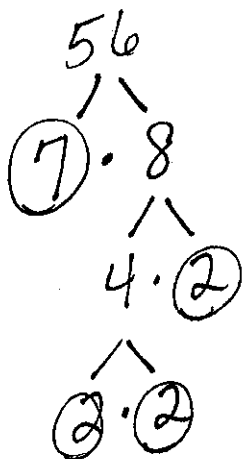


$$\boxed{2 \cdot 2 \cdot 2 \cdot 7}$$

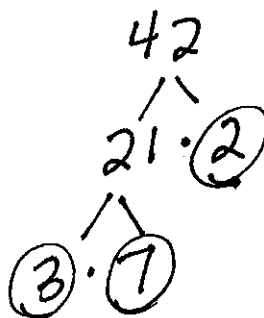
Common Prime Factors : $2 \times 2 = 4$

GCF is 4

Ex: 56 and 42



$$\boxed{2 \cdot 2 \cdot 2 \cdot 7}$$

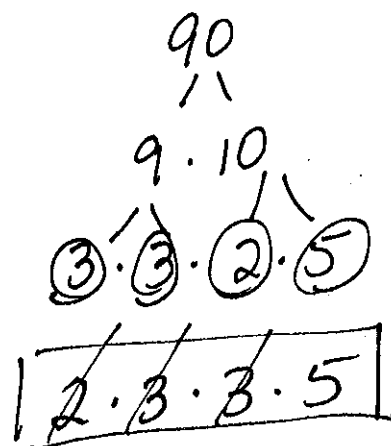
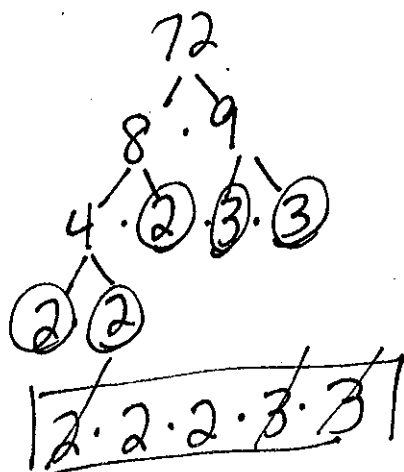
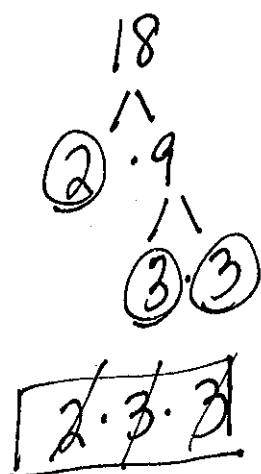


$$\boxed{2 \cdot 3 \cdot 7}$$

Common : $2 \times 7 = 14$

14 is the GCF

Ex: 18, ~~72~~, 72 and 90



Common: $2 \times 3 \times 3 = 18$
18 is the GCF